

## WHAT IS CLAIMED

1                   1.     A system for supporting transacted remote file operations between a  
2 local device and a remote device, the system comprising:  
3                   a transaction manager; and  
4                   a redirector to receive a request to perform a file operation on a file residing  
5 in the remote device, the local and remote devices connected to a network, wherein the  
6 redirector is to send the request to the remote device over the network within a  
7 transaction.

1                   2.     A system according to Claim 1, wherein the transaction manager is  
2 not integrated into a file system.

1                   3.     A system according to Claim 1, wherein the redirector is receive file  
2 information from the remote device that includes a file system identifier (Fid) and a  
3 version identifier associated with the file.

1                   4.     A system according to Claim 3, wherein the redirector is to  
2 selectively create a file control block (FCB) associated with the file, the FCB including  
3 the Fid and version identifier information associated with the file.

1                   5.     A system according to Claim 4, wherein the redirector is to  
2 determine whether an existing FCB can be used for the request.

1                   6.     A system according to Claim 5, wherein the redirector is to  
2     determine whether an existing FCB that is associated with an uncommitted transaction  
3     can be used for the request.

1                   7.     A system according to Claim 5, wherein the redirector, in  
2     determining whether an existing FCB can be used for the request, is to compare a  
3     pathname and transaction context for the request with a pathname associated with the  
4     existing FCB.

1                   8.     A system according to Claim 1, wherein the transaction manager is a  
2     kernel level transaction manager.

1                   9.     A system according to Claim 1, wherein the redirector is to  
2     selectively indicate in the request that the remote device should signal the local machine  
3     responsive to a file operation being performed on the file that was not requested by the  
4     redirector.

1                   10.    A system according to Claim 1, wherein the redirector sends the  
2     transaction with request using a protocol based on a server message block (SMB)  
3     protocol.

1                   11.    A system according to Claim 10, wherein the protocol supports non-  
2     transacted remote file operations.

1                   12.    A computer-readable medium having stored thereon components as  
2   recited in Claim 1.

1                   13.    A system for supporting transacted remote file operations between a  
2   local device and a remote device, the system comprising:  
3                   a server component (SRV) to receive a request from a remote device, the  
4   request being for a transacted file operation on a file residing in the local device;  
5                   a transaction manager; and  
6                   a file system to perform the requested file operation on the file responsive  
7   to the SRV component and transaction manager, the local and remote devices connected  
8   to a network.

1                   14.    A system according to Claim 13, wherein the SRV component  
2   provides a file system identifier (Fid) and a version identifier associated with the file to  
3   the remote device.

1                   15.    A system according to Claim 13, wherein the transaction manager is  
2   a kernel level transaction manager.

1                   16.    A system according to Claim 13, wherein the file system is to  
2   selectively cause the SRV component to signal the remote device responsive to a file  
3   operation being performed on the file that was not requested by the remote device.

1                   17.    A system according to Claim 13, wherein the SRV component sends  
2   the transaction with request using a protocol based on a server message block (SMB)  
3   protocol.

1                   18.    A system according to Claim 17, wherein the protocol supports non-  
2   transacted remote file operations.

1                   19.    A computer-readable medium having stored thereon components as  
2   recited in Claim 12.

1                   20.    A method of implementing a transacted remote file operation on a  
2   local device, the method comprising:  
3                   receiving a request for a transacted remote file operation;  
4                   retrieving a transaction;  
5                   marshalling the transaction;  
6                   sending the transaction with the request to a remote device over a network;  
7   and  
8                   receiving from the remote device information resulting from the file  
9   operation.

1                   21.    A method according to Claim 20, wherein information received from  
2   the remote device includes a file identifier (Fid) and a version identifier.

1                   22.    A method according to Claim 21, wherein receiving a request for a  
2 transacted remote file operation further comprises:

3                   determining whether the request is for a file operation on remote device;

4                   providing a name for the request if the request is for a file operation on a  
5 remote device; and

6                   selectively creating a file control block (FCB) associated with the file, the  
7 FCB including the Fid and version identifier information associated with the file.

1                   23.    A method according to Claim 22, wherein selectively creating a FCB  
2 further comprises determining whether an existing FCB can be used for the request.

1                   24.    A method according to Claim 23, wherein determining whether an  
2 existing FCB can be used for the request further comprises determining whether the  
3 existing FCB is associated with an uncommitted transaction.

1                   25.    A method according to Claim 23, wherein determining whether an  
2 existing FCB can be used for the request, further comprises comparing a pathname and  
3 transaction context for the request with a pathname associated with the existing FCB.

1                   26.    A method according to Claim 20, wherein the method is performed  
2 in a kernel mode.

1                   27.    A method according to Claim 20, further comprising selectively  
2 indicating in the request that the remote device should signal the local machine in

3 response to a file operation being performed on the file that was requested by a device  
4 other than the local device .

1 28. A method according to Claim 20, wherein the transaction is sent  
2 with request using a protocol based on a server message block (SMB) protocol.

1 29. A method according to Claim 28, wherein the protocol supports non-  
2 transacted remote file operations.

1 30. A computer-readable medium having computer-executable  
2 instructions to perform operations comprising:  
3 receiving a request for a transacted remote file operation;  
4 retrieving a transaction;  
5 marshalling the transaction;  
6 sending the transaction with the request to a remote device over a network;  
7 and  
8 receiving from the remote device information resulting from the file  
9 operation.

1 31. A computer-readable medium according to Claim 30, wherein  
2 information received from the remote device includes a file identifier (Fid) and a version  
3 identifier.

1 32. A computer-readable medium according to Claim 31, wherein  
2 receiving a request for a transacted remote file operation further comprises:

3                   determining whether the request is for a file operation on remote device;  
4                   providing a name for the request if the request is for a file operation on a  
5 remote device; and  
6                   selectively creating a file control block (FCB) associated with the file, the  
7 FCB including the Fid and version identifier information associated with the file.

1                   33. A computer-readable medium according to Claim 32, wherein  
2 selectively creating a FCB further comprises determining whether an existing FCB can be  
3 used for the request.

1                   34. A computer-readable medium according to Claim 33, wherein  
2 determining whether an existing FCB can be used for the request further comprises  
3 determining whether the existing FCB is associated with an uncommitted transaction.

1                   35. A method of implementing a transacted remote file operation  
2 between a local device and a remote device, the method comprising:  
3                   receiving a request from a remote device, the request being for a transacted  
4 file operation on a file residing in the local device, the local and remote devices being  
5 connected to a network; and  
6                   performing the requested file operation on the file, the file operation being  
7 part of the transaction.

1                   36.    A method according to Claim 35, further comprising providing a file  
2   system identifier (Fid) and a version identifier associated with the file to the remote  
3   device.

1                   37.    A method according to Claim 35, wherein the method is performed  
2   in a kernel mode.

1                   38.    A method according to Claim 35, further comprising selectively  
2   signaling the remote device responsive to a file operation being performed on the file that  
3   was not requested by the remote device.

1                   39.    A method according to Claim 35, wherein the local and remote  
2   device selectively communicate over the network using a protocol based on a server  
3   message block (SMB) protocol.

1                   40.    A method according to Claim 39, wherein the protocol supports non-  
2   transacted remote file operations.

1                   41.    A computer-readable medium having computer-executable  
2   instructions to perform operations comprising:

3                   receiving a request from a remote device, the request being for a transacted  
4   file operation on a file residing in the local device, the local and remote devices being  
5   connected to a network; and



6 performing the requested file operation on the file, the file operation being  
7 part of the transaction.

1 42. A computer-readable medium according to Claim 41 wherein the  
2 operations further comprise providing a file system identifier (Fid) and a version  
3 identifier associated with the file to the remote device.

1 43. A computer-readable medium according to Claim 41, wherein the  
2 operations are performed in a kernel mode.

1 44. A computer-readable medium according to Claim 41, wherein the  
2 operations further comprise selectively signaling the remote device responsive to a file  
3 operation being performed on the file that was not requested by the remote device.

1 45. A system for supporting transacted remote file operations between a  
2 local device and a remote device connected to a network, the system comprising:  
3 means for managing transactions; and  
4 means for sending a request with a transaction to the remote device to  
5 perform a file operation on a file residing in the remote device.

1 46. A system according to Claim 45, further comprising means for  
2 receiving file information from the remote device that includes a file system identifier  
3 (Fid) and a version identifier associated with the file.

1           47. A system according to Claim 46, further comprising means for  
2 selectively creating a file control block (FCB) associated with the file, the FCB including  
3 the Fid and version identifier information associated with the file.

1           48. A system according to Claim 47, further comprising means for  
2 determining whether an existing FCB can be used for the request.

1           49. A system according to Claim 48, further comprising means for  
2 determining whether an existing FCB that is associated with an uncommitted transaction  
3 can be used for the request.

1           50. A system according to Claim 45, further comprising means for  
2 selectively indicating in the request that the remote device should signal the local  
3 machine responsive to a file operation being performed on the file that was not requested  
4 by the redirector.

1           51. A system according to Claim 13, wherein the transaction manager is  
2 not integrated into a file system.

1           52. A method for use in performing a transaction file operation over a  
2 network, the method comprising:  
3           receiving a pre-prepare notification from a transaction manager residing in  
4 a first computing platform;

5                    providing file operation data from the first computing platform to a second  
6 computing platform via the network;  
7                    receiving a prepare notification from the transaction manager residing in  
8 the first computing platform; and  
9                    providing a message to the second computing platform containing the  
10 prepare notification via the network.

1                    53.    A method for use in performing a transacted file operation over a  
2 network, the method comprising:  
3                    receiving transaction information; and  
4                    sending, via the network, the transaction information and a request to create  
5 or open a file or directory to a computing platform connected to the network, the request  
6 including a first structure, the first structure containing a field to hold transaction context  
7 and a field to hold the transaction information's length.

1                    54.    A method according to Claim 53, wherein a response to the request  
2 comprises a second structure that contains a field to hold a file system identifier and a  
3 field to hold a version identifier.

1                    55.    A method according to Claim 53, further comprising receiving a  
2 response that includes a field to indicate whether the computing platform connected to  
3 the network supports transacted file operations.

1                   56.    A method according to Claim 53, further comprising sending, via the  
2 network, transaction information and a request to find a file to the computing platform,  
3 the request to find a file including a field to indicate that a transaction is being used with  
4 the file.

1                   57.    A method according to Claim 53, further comprising receiving, via  
2 the network, a message providing notification from the computing platform connected to  
3 the network regarding transaction state changes.

1                   58.    A method for use in performing a transacted file operation over a  
2 network, the method comprising:

3                   receiving a pre-prepare notification from a first computing platform in a  
4 second computing platform;

5                   providing the pre-prepare notification to a transaction manager residing in  
6 the second computer platform;

7                   receiving, via the network, file operation data from the first computing  
8 platform in the second computing platform;

9                   providing the file operation data to a file system residing in the second  
10 computing platform;

11                  receiving, via the network, a prepare notification from the first computing  
12 platform; and

13                  providing the prepare notification to the transaction manager residing in the  
14 second computing platform.